## CLAIMS

1. An acid liquid leakage sensor comprising

a first conductive member, a second conductive member, and

an electrically insulating material which establishes an electrically insulating state between said first conductive member and said second conductive member; and wherein said electrically insulating material includes a macromolecular compound having a basic functional group, and is one whose electrical insulation characteristic decreases upon reaction with an acid liquid.

2. The acid liquid leakage sensor of Claim 1, wherein said macromolecular compound has a glass transition temperature Tg of 40°C or higher.

3. The acid liquid leakage sensor of Claim 1 or Claim 2, wherein said macromolecular compound is obtained by radical polymerization of a monomer component having a basic functional group, and a monomer component which is capable of copolymerization with said monomer component.

4. The acid liquid leakage sensor of Claim 3, wherein said monomer component having a basic functional group includes 10% or more of all of the radical polymerized monomers which make up said macromolecular compound.

5. The acid liquid leakage sensor of any one of Claims 1 through 4, wherein said electrically insulating material includes 10% or more of an extender.

6. The acid liquid leakage sensor of Claim 5, wherein said extender includes a metallic carbonate.

7. The acid liquid leakage sensor of any one of Claims 1 through 6, wherein:

said second conductive member is made from a substance whose ionization tendency is of a value different from the ionization tendency possessed by the

substance from which said first conductive member is made; and

when the electrical insulation characteristic of said electrically insulating material decreases, an electromotive force which is generated between said first conductive member and said second conductive member is detected.

8. The acid liquid leakage sensor of any one of Claims 1 through 7, wherein

said first conductive member is a first comb shaped electrode which comprises a common electrode member and a plurality of fine electrode members which extend from this electrode member; and

said second conductive member is a second comb shaped electrode which comprises a common electrode member and a plurality of fine electrode members which extend from this electrode member between said fine electrodes of said first comb shaped electrode.

9. The acid liquid leakage sensor of Claim 8, wherein said first comb shaped electrode and said second comb shaped electrode are spaced apart by a gap which is greater than or equal to 0.5 mm and less than or equal to 8 mm.

10. The acid liquid leakage sensor of any one of Claims 1 through 9, wherein said first and second conductive members are made from a printing material in which a metallic material selected from zinc, copper, iron, aluminum, tin, nickel, and magnesium, or a powder of said metallic material, is mixed with a resin which becomes a binder.

11. The acid liquid leakage sensor of any one of Claims 1 through 10, further comprising a notification means which operates by electrical conduction or said electromotive force between said first conductive member and said second conductive member.